



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

1A1
THRU
1A7

TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

FEATURES

- * High reliability
- * Low leakage
- * Low forward voltage drop
- * High current capability

MECHANICAL DATA

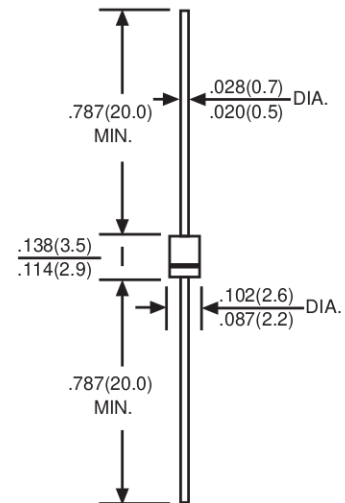
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.19 gram approx.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



R-1



Dimensions in inches and (millimeters)

		SYMBOL	1A1	1A2	1A3	1A4	1A5	1A6	1A7	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	V _{olts}
Maximum RMS Voltage		V _{RMS}	35	70	140	280	420	560	700	V _{olts}
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	V _{olts}
Maximum Average Forward Rectified Current 375"(9.5mm) lead length at T _A = 50°C		I _O	1.0							A _{mps}
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I _{FSM}	30							A _{mps}
Maximum Instantaneous Forward Voltage at 1.0A DC		V _F	1.1							V _{olts}
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T _A =25°C	I _R	5.0							μA _{mps}
	@ T _A =100°C		50							
Typical Junction Capacitance (Note 1)		C _J	15							pF
Typical Thermal Resistance (Note 2)		R _{θJA}	50							°C/ W
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150							°C

Note 1: Measured at 1 MHz and applied reverse voltage of 4.0 volts.

Note 2: Typical thermal resistance from junction to ambient.

RATING AND CHARACTERISTIC CURVES (1A1 THRU 1A7)

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

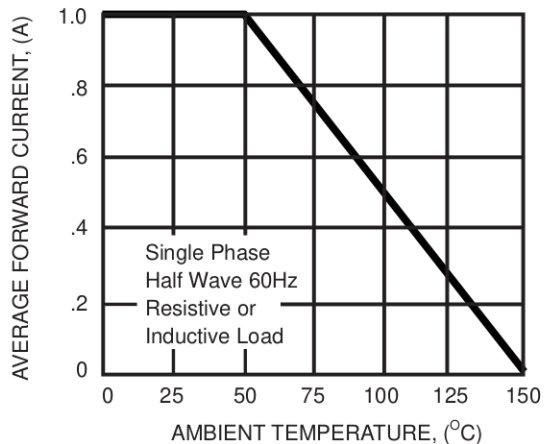


FIG. 2
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

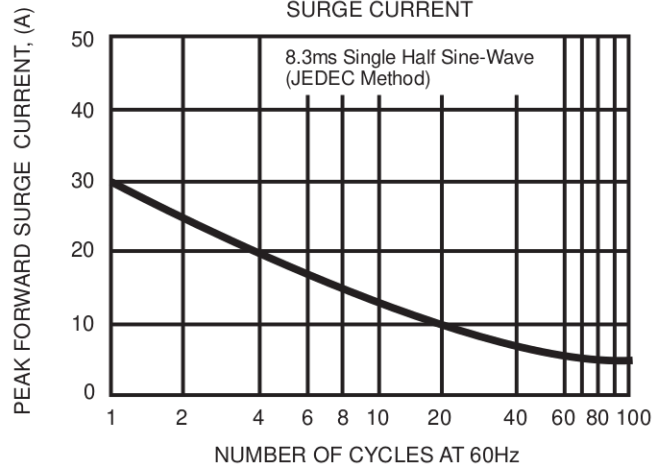


FIG. 3
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

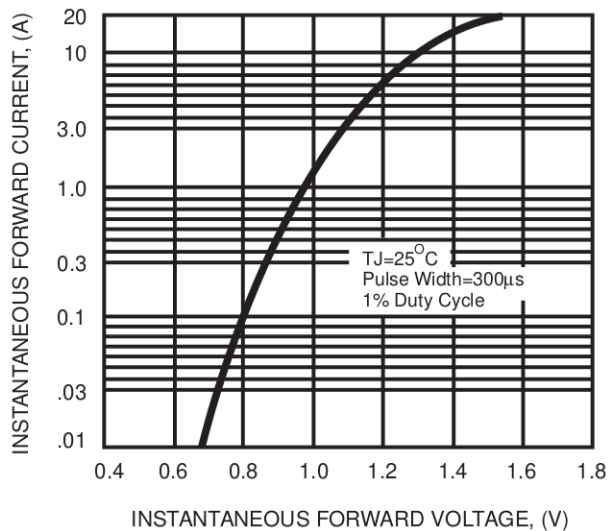


FIG. 4
TYPICAL REVERSE CHARACTERISTICS

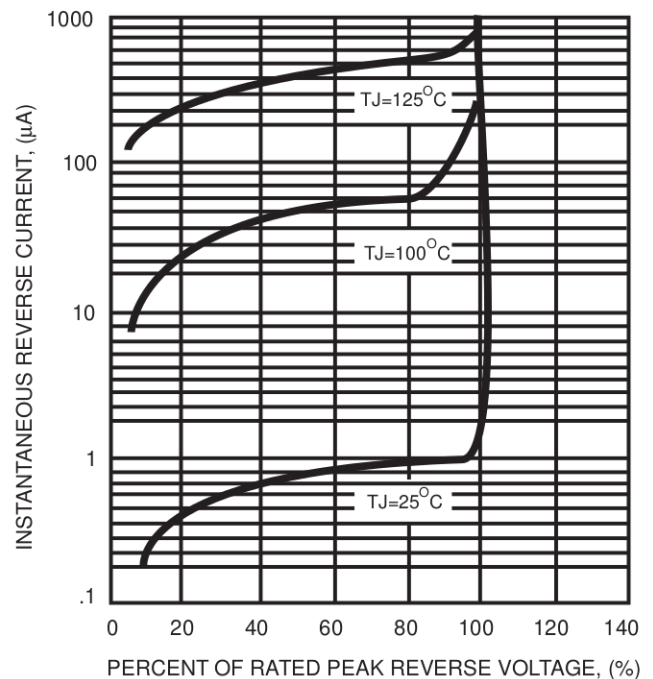
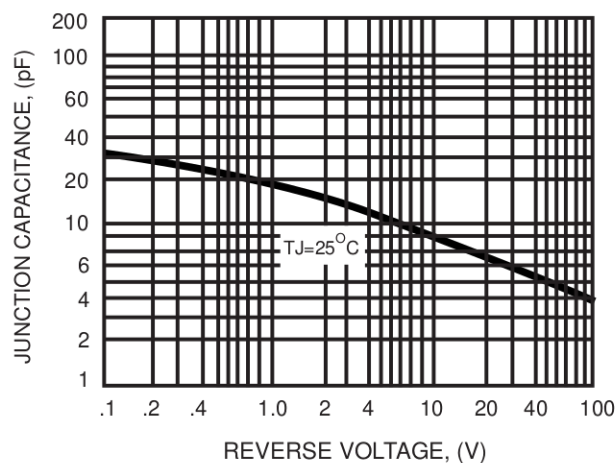


FIG. 5
TYPICAL JUNCTION CAPACITANCE



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